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Internship Report

Project analysis of a Chinese Private Equity Fund:

Tanghong Heavy Industry Special Purpose Vehicle Co., Ltd

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ABSTRACT

The purpose of this Work Project is to help investors understand how a Chinese private equity fund works through a pre-IPO project analysis of a Chinese private equity fund company named New Silk Road Investment Management Co., Ltd. Firstly, the investment target was selected through analyzing Chinese listing requirements and investment preference of our investment team. Then I started to do the industry research and company research of the investment target to analyze its situation. Finally, the valuation of investment target was done based on some assumptions to project the purchase price.

Keywords: private equity funds, listing requirements, industry research, purchase price.

1. Literature review

1.1 Definition and Classification of Chinese Private Equity Funds

In contrast to public funds, private funds refer to the investment funds set up by raising from private investors. According to the “Interim Measures for the Supervision and Administration of Privately-Raised Investment Funds” (*私募投资基金监督管理暂行办法*), the Chinese private funds have the following categories (CSRC, 2015):

- Private securities investment funds that mainly invest in publicly traded shares.
- Private equity investment funds (including venture capital funds) that mainly invest in non-publicly traded shares.
- Other private investment funds.

By the end of August, 2017, the scale of Chinese private funds reached 10.21 trillion RMB. The private equity funds (including venture capital funds) accounted for about 62% of the total private funds, and has become the most important component of Chinese private funds industry (National Business Daily, 2017).

According to different development stage of the invest targets, private equity funds can be divided into:

- Venture Capital fund. It mainly invests in start-up business which is perceived to have excellent growth prospects but does not have access to capital markets. It is a type of financing sought by early-stage companies seeking to grow rapidly (The Free Dictionary, 2012).
- Development Capital fund. This equity funding is for the expansion of established and profitable firms which have passed the startup stage. It is generally less risky and more rewarding than funding new ventures (Business Dictionary, 2017).
- Buyout fund. It mainly specializes in the acquisition of target companies. Its investment strategy is to control the target companies through acquiring their stake and then restructure and rebuild it for a period time before resale (WikiMBA, 2015).
- Pre-IPO fund. It mainly invests in the enterprises that meet the listing requirements of stock exchange in China, and the exit mode is generally selling the shares on the stock exchange after the IPO.
- Private Investment in Public Equity (PIPE) fund. It is an investment by a private equity fund into a publicly traded company. The investments usually take form of preferred stock at a discount (Nasdaq, 2017).

1.2 The Situation of Chinese Private Equity Funds Industry

In 2013, Chinese "Securities Investment Funds Law" (*证券投资基金法*) was revised and private equity fund was first clarified by law. On February 7, 2014, Asset Management Association of China formally started the registration and archival filing regarding private equity funds institutions according to the law, which means the Chinese private equity funds industry was formally recognized by law. And the Asset Management Association of China also began to release the statistics report of Chinese private equity funds industry from that time (AMAC, 2017). The private equity funds industry of China is still immature and underdeveloped.

From 2006 to 2016, the private equity funds in China raised a total of 532 billion US dollars, ranking first in the Asian Private Equity and Venture Capital market. In the background of an insignificant decline in the scale of worldwide Private Equity and Venture Capital fund raising, the funds raised in the Chinese market still increased considerably (49%) in 2016 (PwC, 2017). The investment deals of Chinese PE funds set a new record in 2016 by increasing 66% to 222.9 billion US dollars. And the most popular investment sector of Chinese private equity funds is still high technology. The exit quantity of Chinese private equity funds remained steady, but

IPO exits reached 165 deals with an increase of 38.7% over the last year, which accounted for 74.66% of the total exit volume in 2016 (PwC, 2017).

The private equity funds industry of China developed rapidly in recent years, but compared to some developed countries, there is still room for improvement. For example, private equity as a percentage of GDP in China is still lower and less than 0.3% at present, compared with 1.9% in the United Kingdom, 0.8% in the United States and 0.7% in India. And in 2014, the gross assets of the private equity funds in the United States is more than 10 times of China , while the GDP of the United States is about 1.56 times of China (Sohu, 2017).

1.3 Introduction of New Silk Road Finance

Shanghai New Silk Road Investment Management Co., Ltd. ("New Silk Road Finance") was founded in 2015 in China (Shanghai) Pilot Free Trade Zone. It is a private equity fund company registered at the Asset Management Association of China. Its main businesses are pre-IPO funds, buyout funds, industrial investment funds, real estate funds. The main investment directions of New Silk Road Finance are the life sciences industry, manufacturing industry, new energy industry. New Silk Road Finance has signed strategic cooperation agreements with some companies and institutions of the United States, Canada, Europe, Israel, such as the Harvard medical school, MGH, Wellman, Toron Capital, MedCap.

The company has branches in Suzhou and Wuxi and some offices in Boston, Wuhan, Xiamen, Beijing. The executives and core management team are composed of senior professionals who come from the renowned investment banks and prominent financial institutions, and have rich experience in Chinese capital markets. The investment team of New Silk Road Finance conducted long-term and in-depth researches in the investment area, which helped the company achieved extraordinary return through investing in some companies successfully listed in the New OTC Market of China, A-share (New Silk Road Finance Website, 2017).

2. Investment Target Selection

2.1 The IPO System of China

The current system of Chinese stock issuance is the approval-based IPO system, which requires the companies not only to disclose the real business situation but also meet the conditions of law and the financial status enacted by the Chinese securities regulatory commission. Since the selection and merit regulation of the companies planning to be listed are fully conducted by the Chinese securities regulatory commission, which means the public offering of poor quality securities are prohibited and the quality of listed securities is guaranteed by the Chinese government. Therefore, if one company is successfully listed as China A-share, its stock price always goes up during the next several days after IPO, and IPO exit channel of Chinese private equity funds usually could obtain a higher return than other exit channels and its average return is about 201% in 2016.

The current system that China is using is different from that of developed countries. The registration-based IPO system is one kind of stock issuance system widely used in stock exchange of developed countries such as America, United Kingdom and so on. Under this system, the companies could issue shares as long as they meet the requirements of the conditions for stock issuance of securities regulatory commission. And when a company applies for the stock issuance, it must report and disclose all kinds of information to the securities regulatory commission exactly and accurately in accordance with the law. The responsibility of the securities regulatory commission is only to conduct a formal examination of the authenticity, accuracy, completeness of the application documents, while the quality of the company planning to be listed needs to be decided by the financial agencies and investors. The registration-based IPO system is also the future direction of Chinese capital market.

2.2 The Main Listing Requirements of China

According to "Administrative Measures for Initial Public Offering and Listing of Stocks" *(首次公开发行股票并上市管理办法)* of China which composed of legal and financial contents, I chose the most quantitative part of the listing requirements to select the investment targets preliminarily.

- **Finance and Accounting**

  The issuer shall meet the following requirements:

  (1) The net profits in the recent three fiscal years shall be positive and accumulatively exceed 30 million RMB;

  (2) The net cash flow from operating activities in the recent three fiscal years has accumulated over 50 million RMB; or the operating revenue in the last three fiscal years has accumulated over 300 million RMB;

  (3) The total issued share capital before the issuance is not less than 30 million RMB;

  (4) At the end of the most recent period, intangible assets account for no more than 20% of the net assets;

  (5) There is no unrecovered loss at the end of the most recent period.

Since the investment target companies are from Chinese new OTC market in our strategy, I screened all companies that meet the financial requirements through the Wind terminal (similar to Bloomberg Terminal).

2.3 The Investment Preferences

The manufacturing industry as the important investment target companies source in our pre-IPO fund. Here are some reasons:

- Chinese companies can more easily recruit the R&D talents to develop their technology.

  The number of college students in China reached 37 million and ranked the first in the world in 2015. And the number of engineering graduates per year in China exceeded 2.4 million since 2013, which can meet the demand of Chinese manufacturing industry significantly.

- The demand of high quality products is gradually increasing in Chinese markets.

  Fifty percent of Chinese consumers claimed they pursue the higher quality and more expensive products in 2016. The consumption of the high quality goods in China increased at least 15% last year.

- Chinese government supports manufacturing transformation and upgrading in terms of policies.

The “Made in China 2025” (*中国制造 2025*) and “Outline of the National Strategy of Innovation-Driven Development” (*国家创新驱动发展战略纲要*) were publicized to assist for the manufacturing companies’ development.

- Our team executives mostly worked in the manufacturing enterprises before, who have the rich experience in analyzing the quality of the investment targets.

Since the P/E ratio of IPO is limited to about 23 in China, the companies whose P/E ratio are lower than 23 are our main investment targets in order to reducing the market risk. At the same time, the pre-IPO funds which invested the companies with lower P/E ratios generally could obtain better return because of the Chinese approval-based IPO system. The investment amount for each company could not exceed 100 million RMB in our pre-IPO fund.

After filtering the investment targets through these conditions, I started to check whether the investment targets meet the legal requirements. Then we began to contact with the investment target companies to ask whether they have the demand for financing in the near future and their financing amount. Finally, we unanimously decided on choosing the “Tanghong Heavy Industry” as our investment target to do the deep research and the due diligence.

3. Introduction of Investment Target

Tanghong Heavy Industry Special Purpose Vehicle Co., Ltd was found in July, 2011 and locates in Tangshan City, Hebei Province, China. Its registered capital was about 157 million RMB. And the "Xian Da" and "Tanghong Heavy Industry" are both registered trademarks of this company.

The company has more than 200 kinds of products and its main products are concrete mixer, powder material transport vehicles, dump trucks, semi-trailer, garbage trucks, garbage transfer stations and other special purpose vehicles, which are widely used in construction, roads transportation, municipal sanitation, petroleum, chemical and other fields. The company has more than 400 sets of advanced testing equipment and manufacturing equipment by now, which could produce more than 6,000 special purpose vehicles every year.

The company covers an area of 190,000 square meters and the workshop area is about 31,600 square meters. It owns about 500 employees including 30 senior engineers, 50 administrative officers, and nearly 100 sales staffs. Tanghong Heavy Industry has offices and service outlets in every province in China, and its sales outlets covering Beijing, Tianjin, Hebei and other major cities in China.

4. Industry Research

4.1 Macroeconomic Environment

Macroeconomic situation refers to the macroeconomic development of state and its trend. The quality of macroeconomic situation has an obvious impact on the business. Thus it's necessary for us to know the macroeconomic environment situation when we need to analyze one industry. The annual gross domestic product of China reached 74.41 trillion RMB in 2016, with an increase of 6.7% over the previous year. Among them, the primary industry added value increased about 3.3% and reached 6.37 trillion RMB; and the secondary industry added value was 29.62 trillion RMB with an increase of 6.1%; the tertiary industry reached 38.42 trillion RMB and increased about 7.8%. And Chinese economy is moving to the good direction (The proportion of tertiary industry first reached over 50% of GDP) and will create a strong consumer demand.

After many years of rapid economic growth, the Chinese economy has started to grow steadily but will still maintain above 6% during the next several years according to the World bank forecast (Annex 1). Besides that, the investment in infrastructure of China (excluding electricity, heat, gas and water production and supply) amounted to 11.88 trillion RMB and increased about

17.4% in 2016. These are good signals for the industry development of the special purpose vehicles.

Considering other related factors such as the investment in fixed assets, areas of housing newly started construction, cement production, total retail sales of consumer goods and roads, goods transported affect the demand of the special purpose vehicles, it’s obvious that most indicators still increased slightly (Annex 2). According to the macroeconomic trend, it is predicted that demand of special purpose vehicles will not shrink significantly.

4.2 The Geographical Advantage

On April 1, 2017, the State Council of China decided to set up the Xiong'an New Area in Hebei Province, which will be another new significant area of China after the Shenzhen Special Economic Zone and Shanghai Pudong New Area. According to Morgan Stanley (2017), the population of the Xiong’an New Area will reach 3.4 million and the total investment will be 1.2 trillion RMB in the next 10 years (Annex 3). Xiong’an New Area is located in the hinterland of Hebei Province, so its infrastructure level is reasonably weak, which will promote the demand in the fields of cement, steel, railways and transportation. Tangshan is about 200 kilometers away from the Xiong'an New Area, which can help the company reduce the cost of transportation.

There are four ports in the Beijing-Tianjin-Hebei Metropolitan Region, which respectively are Tianjin Port, Tangshan Port, Huanghua Port and Qinhuangdao Port, and the latter three ports are all located in Hebei Province. And it is a common practice that Chinese local government always like to purchase the local products. With the rebound of imports and exports of China, the busy freight transportation of ports will increase the demand for special purpose vehicles. Tangshan is an important port in the Beijing-Tianjin-Hebei Metropolitan Region, thus the local special purpose vehicles companies of Tangshan would benefit from the great geographical advantage.

4.3 The Proportion of Special Purpose Vehicles in Commercial Vehicles

From 2007 to 2016, the proportion of special purpose vehicles in Chinese commercial vehicles was continuously increasing. The proportion of special purpose vehicles in Chinese commercial vehicles has risen from 22.4% to 30.5% from 2012 to 2016, and the proportion of semi-trailer vehicles in special purpose vehicles has also increased from 3.0% to 15.7% at the same period.

The sales of special purpose vehicles in China firmly kept above 1 million in the past 3 years, and it was estimated to reach 1.05 million in 2017 (Annex 5).

Chinese commercial vehicles market showed two stages of development: From 2007 to 2010, Chinese commercial vehicles market grew rapidly and the sales increased from 2.50 million to 4.37 million. Although Chinese commercial vehicles sales declined in the period of 2010-2012 and 2013-2015, its production still kept above 3.40 million. After that, Chinese commercial vehicle sales began to increase again and reached 3.70 million in 2016 (Annex 4). All of them showed that sales of commercial vehicles in China was volatile and cyclical in nature.

4.4 Concrete Mixer Industry

The concrete mixer industry is usually affected by the macroeconomic environment and the investment in fixed assets. The sales of concrete mixers continuously increased in western China and were stable in eastern China in recent 3 years.

The concentration of Chinese concrete mixer industry is not relatively high. The dominant company is “HualinXingma” with the proportion of 11.6% and the “Tanghong Heavy Industry” accounted for 4.9% in 2016. The proportion of “Tanghong Heavy Industry” was similar as other companies ranked from 4th to 7th in the concrete mixer industry of China, the slight difference means it would be an opportunity for some companies to surpass other competitors to improve market share (Annex 6).

Affected by some new regulations of concrete mixer industry issued by Chinese government, the production of heavy concrete mixers was limited in order to protect the road and bridges, thus the proportion of medium-sized concrete mixers increased from 0.5% to 12.5% in the period of 2011-2016, and that of heavy concrete mixers continued to decline at the same time.

4.5 Semi-Trailer Industry

From 2012 to 2016, the sales of semi-trailers increased from 1.20 million to 3.74 million in China, which indicates that the demand for semi-trailers is picking up. And the sales of Chinese semi-trailers reached 2.06 million with an increase of 82.2% from January to April in 2017. In 2017, the macroeconomic environment of China maintained a stable growth, the overall demand of the logistics industry was robust and the volume of road freight traffic increased steadily, which pushed the demand of the semi-trailers significantly. And the sales of semi-trailers was predicted to reach 6.40 million with the growth of 71.1% in 2017 (Annex 7). On the other hand, due to the implementation of the new GB1589 standard in China, the capacity of semi-trailers dropped and some types of the semi-trailers were forced to be scrapped, which would result in the demand growth of the semi-trailers.

4.6 Sanitation Vehicle Industry

In recent years, with citizens' increasing awareness of environmental protection, Chinese municipal department has stepped up its purchases of sanitation vehicles. The production of sanitation vehicles increased from 14.3 thousand to 86.8 thousand in the period of 2009-2016, and its average growth rate was about 29.4% each year. And the container detachable garbage trucks and compression garbage trucks kept increasing continuously in the past 5 years. In the first half of 2017, the total production of sanitation vehicles in China was 47 thousand with an increase of 32.43% over the same period of last year.

Affected by the new energy policy in China, new energy sanitation trucks will become the future trend in the next several years. Since the consumption of new energy vehicles in private department is not yet mature in China, the promotion of domestic new energy vehicles consumption mainly depends on the public sectors. Therefore, the government of some cities such as Beijing and Shanghai requires that the proportion purchased of new energy sanitation trucks should not be lower than 50%.

5. Company Research

5.1 Main Businesses

The main businesses of “Tanghong Heavy Industry” are composed of the concrete mixers, semi-trailers and sanitation vehicles, which occupied about 78.49%, 12.59%, 4.11% respectively in 2016 (Annex 8). And the total proportion of these main businesses increased from 91.92% to 95.20% in the period of 2015-2016.

At the same period, the revenue of concrete mixers increased from 160.77 million RMB to 336.74 million RMB and its proportion of total revenue also increased about 11.47%. “Tanghong Heavy Industry” started to produce the sanitation vehicles in 2015 under its diversification strategy, and the revenue of sanitation vehicles increased from 1.78 million RMB to 17.64 million RMB in 2016 (Annex 9).

Since the demand of sanitation vehicles is growing fast in recent years and the market share of “Tanghong Heavy Industry” is still very small, “Tanghong Heavy Industry” would need to improve its products competitiveness and market share in the next several years.

5.2 Top 5 Suppliers and Customers

The procurement of “Tanghong Heavy Industry” mainly are the chassis, steels and mechanical parts, most of the raw materials for the special purpose vehicles industry can be supplied domestically and make little effect on the company. The purchase amount of the company’s top 5 suppliers reached about 327.37 million RMB and accounted for 81.95% of the total purchase in 2016 (Annex 10). And all the top 5 suppliers are located in the near cities of Tangshan, which is helpful for “Tanghong Heavy Industry” to reduce the cost of procurement.

The sales of company’s top 5 customers were about 161.86 million RMB with the proportion of only 37.73% in 2016 (Annex 11), on the other hand, the more dispersed customers commonly contribute to reducing the sales risk. At the same time, the sales of “Tanghong Heavy Industry” were mainly concentrated in only a few provinces of China such as Hebei, Henan, Shandong, and the company planned to develop its business in other provinces in order to increase the region diversification.

5.3 Financial Situation

The current assets of the company were mainly cash, accounts receivable, prepaid expenses and inventories, with its average inventory days outstanding was lower than 200 days (Industry average level was 325 days) and its current ratio (Current assets/Current liabilities) was 1.84

and greater than 1, which meant the efficiency and short-term liquidity of the company were acceptable by now.

The asset turnover ratio of “Tanghong Heavy Industry” was 2.05, and its inventory turnover ratio was 5.30 and accounts receivable ratio was 5.51 until Sep 30, 2017, which were greater than that of most other competitors and the industry average level (Annex 12), that meant “Tanghong Heavy Industry” was more efficient in managing its resources comparing with other companies.

The revenues and net incomes of the company increased significantly from 2014 to 2016 and its average growth rate of revenues and net incomes was 71.16% and 76.61% respectively in this period. Besides that, by the end of the third quarter of 2017, the revenue and net incomes of the company increased 165.01% and 90.47% respectively over the same period last year. These proved the financial situation of the company was still suitable to meet future development.

5.4 Risk

- The risk of improper management of main shareholders

Ms. Zhang holds 59.71% of the shares of the company and her husband Mr. Wang holds

10.15% shares of the company, which means they hold the absolute power of the company. If they make some mistaken decisions for the company management, it would be tough for other shareholders to against their decisions.

- The risk of purchasing the raw materials

  The biggest supplier accounted for 58.08% of the total procurement. If the suppliers do not deliver chassis on time, the company's production schedule will be affected largely.

- The risk of more intense competition in special purpose vehicles industry

  Although the company have a higher market recognition in some regions of China, it did not have absolute competitive advantage in the market.

- The lack of products diversification

  The company revenue mainly came from the concrete mixers and the semi-trailers, accounting for about 91.08% of the total sales.

- The risk of research and development failure

  If the research and development of new special purpose vehicles failed, which will result in not be able to provide the products to meet market demand and finally affecting the company's profit growth.

5.5 Valuation

The investment plan was based on some following assumptions:

- The 2017 financial results of the company were derived from its third quarter 2017 results.
- Assuming no adjustments of the tangible and intangible assets and the depreciation would keep steady and equal to the capital expenditure since 2017.
- The revenues of the company will grow at 20% from 2017 to 2020 and keep a perpetual growth at 8% after 2020.
- The debt (short and long-term) and equity (capital) of the company will increase and no dividends payout during the period.
- Since the company would obtain the recognition of high-tech enterprise and can benefit from a favorable tax policy, the tax rate will decrease from 25% to 15% in the next year.
- Other revenues and expenses, other current liabilities and deferred tax liabilities wouldn't change.

According to these assumptions and previous years' financial statements, we derived the following cash flow statement by 2020 from the obtained income statement (Annex 13) and balance sheet (Annex 14).

RMB'000	2015	2016	2017	2018	2019	2020
Cash Flows from Operating Activities						
Inflows						
Sales	228318	428995	1136901	1364281	1637137	1964565
Other Revenues and Expenses	3341	2814	3102	3102	3102	3102
Outflows						
Materials	190209	377258	1034345	1241214	1489457	1787349
SG&A	10760	10278	11822	14186	17024	20428
Taxes	5903	10413	19835	24388	29852	36414
Net Cash Flow Operations	24786	33860	74001	87594	103906	123476
Cash Flows from Investing Activities						
Purchase of Fixed Assets	-1134	5221	183379	0	0	0
Net Cash Flow Investing	1134	-5221	-183379	0	0	0
Cash Flows from Financing Activities						
Financial Expenses	-6870	-1134	-6254	-6369	-6503	-6649
Increase of Financial Debt	74700	0	124300	4985	5354	5793
Net Cash Flow Financing	67831	-1134	118046	-1384	-1149	-856
Net Variation of Cash	93751	27505	8668	86210	102757	122620
Cash Beginning of the Year	11235	104986	132491	141159	227369	330126
Cash End of the Year	104986	132491	141159	227369	330126	452747

Then I used the Discount Free Cash Flow to Firm (FCFF) to perform a valuation of the investment target. The Weighted Average Cost of Capital (Annex 16) was calculated as the appropriate discount rate, with the following premises:

- The CAPM model was used to calculate the equity discount rate, given the risk-free rate was the Yield-to-Maturity of Chinese 10-Year Government Bonds (3.01% at 31/12/2016), the market risk premium was 11.99% and the market beta of this company was 0.74 (Annex 15).
- Since all the debt of this company was bank loans, the cost of debt could be thought as the Chinese banks benchmark interest rate of 4.75%.

Through discounting the FCFF by using WACC, the enterprise value should be 1.134 billion RMB and the equity value should be 885 million RMB (Annex 17).

6. Recommendations

"Tanghong Heavy Industry" would be an attractive investment target to purchase, considering the following:

- ✓ Chinese economic growth will keep above 6% in the next several years, which would affect positively on the investment in infrastructure and the demand of special purpose vehicles.
- ✓ The company will benefit from the construction and transportation of the nearby Xiong'an New Area and four important ports in north China.
- ✓ The main products demand of the company still keeps increasing, which contributes to expanding production and improving its market share.
- ✓ The company's current P/E ratio is about 15 and lower than the industry average P/E ratio of 54, thus the high return will be obtained once the company could be successfully listed in the Chinese A-share.